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HICKMAN PALERMO TRUONG & BECKER, LLP
2055 GATEWAY PLACE
SUITE 550
SAN JOSE, CA 95110

EXAMINER

TIV, BACKHEAN

ART UNIT

PAPER NUMBER

2151

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,548

Applicant(s)

NADEAU ET AL.

Examiner

Backhean Tiv

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

Claims 1-21 are pending in this application. This is a response to the amendment filed on 1/10/05.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,6,7,9,10,13,14,15,19,20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,664,978 issued to Kekic et al.(Kekic) in view of US Patent 6,055,575 issued to Paulsen et al.(Paulsen).

As per claim 1, Kekic teaches a method of controlling access of network management requests directed to one or more network devices that participate in a virtual private network(Fig.1-5c), the method comprising the computer-implemented steps of: receiving a request to carry out a management protocol operation(col.3, lines 34-col.4, lines 28); identifying, among a plurality of managed objects, a subset of objects that requests associated with the network are permitted to access(col.4 lines 31-49); and providing the request with access to only the subset of objects(col.4, lines 31-49).

Kekic does not however, explicitly teaches determining an identifier of a virtual private network in the request.

Paulsen teaches determining an identifier of a virtual private network in the request(col.7, lines 31-39).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic to explicitly add determining an identifier of a virtual private network in the request as taught by Paulsen in order to authenticate the identity of the remote client(Paulsen, col.7, lines 34-35).

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen in order to provide a method for secure communication between a remote computer and a private computer network(Paulsen, col.1, lines 8-12).

As per claim 2, a method as recited in claim 1, further comprising the steps of providing, at one of the network devices, a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects(Paulsen, Fig.1-4, Kekic, Figs.1-7).Motivation to combine set forth in claim 1.

As per claim 6, determining whether the identifier from the request is in the view-based access control model table(Kekic ,col.3, lines 20-22, col.4, lines 32-49); when the identifier from the request is in the view-based access control model table: identifying a management information base variable referenced in the request(Kekic ,col.4, lines 32-49); based on one or more MIB(MANAGEMENT INFORMATION BASE) Views referenced in the view-based access control model table, determining whether a protocol operation of the request is allowed for the variable(Kekic ,col.4, lines 38-42); dispatching information identifying the variable and the protocol operation to a code implementation of the protocol operation only when the protocol operation is allowed for

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the variable(Paulsen, col.9, line 33-col.12, line 67). Motivation to combine set forth in claim 1.

As per claim 9, Kekic teaches a method of controlling access of network management requests directed to one or more network devices that participate in a virtual private network(Fig.1-5c), the method comprising the computer-implemented steps of:

receiving a request to carry out a management protocol operation(col.3, lines 34-col.4, lines 28),extracting the value and determining a protocol operation that is embodied in the request(col.4, lines 31-49); using a view-based access control model(Figs.1-7),processing the requested operation only if access is allowed to managed objects in the management information base, based on the matching management information base view(col.4, lines 31-49); matching the value to a management information base view that corresponds to the requested operation(col.4, lines 31-49).

Kekic however does not explicitly teach the request contains a virtual private network identifier in a security name value(Paulsen, col.7, lines 31-39).

Paulson explicitly teach the request contains a virtual private network identifier in a security name value(col.7, lines 31-39);.

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic to explicitly add the request contains a virtual private network identifier in a security name value as taught by Paulsen in order to authenticate the identity of the remote client(Paulsen, col.7, lines 34-35).

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen in order to provide a method for secure communication between a remote computer and a private computer network(Paulsen, col.1, lines 8-12).

As per claim 10, a method as recited in Claim 9, further comprising the steps of determining whether the request can be satisfied(Kekic, col.4, lines 31-49); extracting the security name value from a context string in the request(Paulsen, col.7, lines 32-45).Motivation to combine set forth in claim 9.

As per claim 13, the method as recited in Claim 10, further comprising the steps of determining whether the security name is in a view-based access control model table(Fig.33); when the security name is found in the view-based access control model table: identifying a management information base variable referenced in the request(Kekic, col.4, lines 32-49); based on one or more views referenced in the view-based access control model table, determining whether the protocol operation is allowed for the variable(Kekic, col.4, lines 38-42); dispatching information identifying the variable and the protocol operation to a code implementation of the protocol operation only when the protocol operation is allowed for the variable(Paulsen, col.9, line 33-col.12, line 67); determining whether a virtual private network identifier is referenced in the request(Kekic, col.4, lines 32-39), processing the request using managed information objects in a default view when no virtual private network identifier is referenced in the request(Kekic, Figs.3-9D), and processing the request using management information objects in a view corresponding to the virtual private network

identifier only when a virtual private network identifies is referenced in the request(Kekic, col.4, lines 32-39).Motivation to combine set forth in claim 6.

Claims 14, 19, 20 are rejected based on the same rationale as claim 1(see above). Motivation to combine set forth in claim 1.

Claim 15 is rejected based on the same rationale as claim 2(see above).
Motivation to combine set forth in claim 2.

Claim 7 is rejected based on the same rationale as claim 6 (see above).
Motivation to combine set forth in claim 6.

As per claim 21, Kekic teaches a method of controlling access of network management requests directed to one or more network devices that participate in one or more virtual private Networks(Figs.1-7), the method comprising the computer-implemented steps of: receiving a request to carry out a SNMP (Simple Network Management Protocol) operation directed to one or more managed objects from a MIB(MANAGEMENT INFORMATION BASE) (Management Information Base) associated with one or more network devices that participate in the networks(Figs.1-44); identifying, among a plurality of managed objects from a MIB(MANAGEMENT INFORMATION BASE) associated with a network device from the one or more network devices that participate in the networks(Figs.1-44), a subset of managed objects that requests associated with the particular network are permitted to access(col.4, lines 31-49); and in response to the request, providing access to only the subset of managed objects(col.4, lines 31-49).

Kekic however does not explicitly teaches multiple virtual private networks and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks.

Paulson teaches multiple virtual private networks(Fig.1) and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks(col.4, lines 22-63).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic to explicitly add multiple virtual private networks and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks. as taught by Paulsen in order to authenticate the identity of the remote client(Paulsen, col.7, lines 34-35).

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen in order to provide a method for secure communication between a remote computer and a private computer network(Paulsen, col.1, lines 8-12).

Claims 3,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,664,978 issued to Kekic et al.(Kekic) in view of US Patent 6,055,575 issued to Paulsen et al.(Paulsen) in further view of RFC 2571, "An Architecture for Describing SNMP Management Frameworks", written by D. Harrington.

Kekic in view of Paulsen teaches all of the limitations of claim 1, however does not explicitly teaches as per claim 3, a method as recited in Claim 1, further comprising

the steps of providing, at one of the network devices, a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects, in the form of one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views.

Harrington explicitly teaches a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects, in the form of one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views(pages 15-25).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic in view of Paulsen to explicitly add a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects, in the form of one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views as taught by Harrington in order provide the framework for SNMPv3(Harrington, page 14).

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen and Harrington in order to provide a method for improvement in the SNMP(Harrington, page 1).

Claim 16 is rejected based on the same rationale as claim 3(see above).

Motivation to combine set forth in claim 3.

Claims 4,8,11,17 are rejected under 35 U.S.C. 103(a) as being obvious over US Patent 6,664,978 issued to Kekic et al.(Kekic) in view of US Patent 6,055,575 issued to Paulsen et al.(Paulsen) in further view of RFC 2575, "View-based Access Control Model for the Simple Network Management Protocol", written by B.Wijnen.

Kekic in view of Paulsen teaches all the limitations of claim 1, however does not explicitly teaches as per claim 4, a method as recited in Claim 1, further comprising the steps of providing, at one of the network devices, one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views, wherein each of the securityName values is associated with a virtual private network, and wherein the corresponding MIB(MANAGEMENT INFORMATION BASE) Views represent access control policies applicable to the associated virtual private networks.

Wijnen teaches at one of the network devices, one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views, wherein each of the securityName values is associated with a virtual private network, and wherein the corresponding MIB(MANAGEMENT INFORMATION BASE) Views represent access control policies applicable to the associated virtual private networks(pages 5-10).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic in view of Paulsen to explicitly add

one of the network devices, one or more entries in a view-based access control model table that associate SNMPv3 securityName values to corresponding MIB(MANAGEMENT INFORMATION BASE) Views, wherein each of the securityName values is associated with a virtual private network, and wherein the corresponding MIB(MANAGEMENT INFORMATION BASE) Views represent access control policies applicable to the associated virtual private networks as taught by Wijnen in order to restrict access of the rights of some groups to only a subset of the management information(Wijnen, page 4)

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen and Wijnen in order to provide a method for remotely managing the configuration parameters for the View-based Access Control Model.

As per claim 8, a method as recited in Claim 1, further comprising the steps of: providing, at a network management station that is communicatively coupled to the network devices, a mapping of a plurality of virtual private network identifiers(Paulsen, Fig.2) to SNMPv3 securityNames(Wijnen, pages 3-10); providing, at the network management station, an executable process that associates a virtual private network identifier with each SNMP request that is issued by the network management station to the network devices(Wijnen, pages 3-10). Motivation to combine set forth in claim 4.

As per claim 11, a method as recited in Claim 10, wherein the matching step further comprises the steps of determining whether the security name is in a view-based access control model table; rejecting and returning the request when the security name

is not found in the view based access control model table(Wijnen, pages 3-10).

Motivation to combine set forth in claim 4.

Claim 17 is rejected based on the same rationale as claim 4(see above).

Motivation to combine set forth in claim 4.

Claims 5,12,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,664,978 issued to Kekic et al.(Kekic) in view of US Patent 6,055,575 issued to Paulsen et al.(Paulsen) in further view of US Patent 6,614,791 issued to Luciani et al.(Luciani).

Kekic in view of Paulsen teaches all the limitations of claim 1, however does not explicitly teach as per claim 5, a method as recited in Claim 1, further comprising the steps of providing, at one of the network devices, a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects, and wherein the steps of identifying a subset of objects and providing the request with access comprise the steps of: determining whether the identifier from the request is in the mapping; when the identifier from the request is in the mapping: identifying a management information base, variable referenced in the request; based on one or more views referenced in the mapping, determining whether a protocol operation of the request is allowed for the variable; dispatching information identifying the variable and the protocol operation to a code implementation of the protocol operation only when the protocol operation is allowed for the variable.

Luciani teaches the steps of providing, at one of the network devices, a mapping of a plurality of identifiers of virtual private networks to corresponding views of subsets of managed objects, and wherein the steps of identifying a subset of objects and providing the request with access comprise the steps of: determining whether the identifier from the request is in the mapping(col.2, lines 45-67); when the identifier from the request is in the mapping(col.2, lines 53-61): identifying a management information base, variable referenced in the request(col.2, lines 53-61); based on one or more views referenced in the mapping, determining whether a protocol operation of the request is allowed for the variable(col.2, lines 32-40); dispatching information identifying the variable and the protocol operation to a code implementation of the protocol operation only when the protocol operation is allowed for the variable(col.2, line 65-col.3, line 5).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the method of Kekic in view of Paulsen to add determining whether the identifier from the request is in the mapping; when the identifier from the request is in the mapping: identifying a management information base, variable referenced in the request; based on one or more views referenced in the mapping, determining whether a protocol operation of the request is allowed for the variable; dispatching information identifying the variable and the protocol operation to a code implementation of the protocol operation only when the protocol operation is allowed for the variable as taught by Luciani in order to support different protocols in a communication network(Luciani, col.1, lines 21-25).

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One ordinary skill in the art at the time of the invention would have been motivated to combine Kekic, Paulsen, and Luciani to provide a method for a shared communication network by multiple consumers(Luciani, col.2, lines 21-25).

Claims 12, 18 are rejected based on the same rationale as claim 5(see above).
Motivation to combine set forth in claim 5.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,664,978 issued to Kekic et al.(Kekic) view of US Patent 6,614,791 issued to Luciani et al.(Luciani).

As per claim 21, Kekic teaches a method of controlling access of network management requests directed to one or more network devices that participate in one or more virtual private Networks(Figs.1-7), the method comprising the computer-implemented steps of: receiving a request to carry out a SNMP (Simple Network Management Protocol) operation directed to one or more managed objects from a MIB(MANAGEMENT INFORMATION BASE) (Management Information Base) associated with one or more network devices that participate in the networks(Figs.1-44); identifying, among a plurality of managed objects from a MIB(MANAGEMENT INFORMATION BASE) associated with a network device from the one or more network devices that participate in the networks(Figs.1-44), a subset of managed objects that requests associated with the particular network are permitted to access(col.4, lines 31-49); and in response to the request, providing access to only the subset of managed objects(col.4, lines 31-49).

Kekic however does not explicitly teaches multiple virtual private networks and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks.

Luciani teaches multiple virtual private networks(Abstract) and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks(Abstract).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the method of Kekic to explicitly add multiple virtual private networks and determining, from the request, an identifier of a particular virtual private network of the multiple virtual private networks as taught by Luciani in order to support different protocols in a communication network(Luciani, col.1, lines 21-25).

One skilled in the art at the time of the invention would have been motivated to combine Kekic and Paulsen in order to provide a method for a shared communication network by multiple consumers(Luciani, col.2, lines 21-25).

Response to Arguments

Applicant's arguments filed on 1/10/05 were persuasive, however they are moot in view of the new grounds of rejection. The applicant has amended the claims to overcome all claim objections and 112 2nd paragraph rejection, therefore these rejection are withdrawn.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Backhean Tiv whose telephone number is (571)272-3941. The examiner can normally be reached on 9 A.M.-12 P.M. and 1 -6 P.M. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT

Backhean Tiv
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4/20/05


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER